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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,731

11/13/2006

Bernd Howe

101769-377 KGB

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EXAMINER

BODAWALA, DIMPLE N

ART UNIT

PAPER NUMBER

1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,731	Applicant(s) HOWE ET AL.	
	Examiner DIMPLE N. BODAWALA	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/6/2006, 1/23/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed on 1/23/2007 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

3. The information disclosure statement filed on 10/6/2006 fails to comply with 37 CFR 1.98(a) (2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion

which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Foreign references cited on PTOL-1449, filed on 10/6/2006 is not considered by examiner because applicant fails to provide a legible copy of each cited foreign patent documents such as EP 1 114 113; EP 0 834 442; and EP 0 733 558.

Claim Objections

4. Claim 6 is objected to because of the following informalities: Claim 6 is objected because claim 6 cites minor typographical error in line 3 such as "during the during the". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 6 recites the limitation "the body shell" in line 4. There is insufficient antecedent basis for this limitation in the claim, because claim 6 is depended on claim 1, wherein claim 1 fails to cite such limitation.

Therefore, such limitation makes the scope of the subject matter indeterminate.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point

out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korchnak et al. (US 2003/0047268) in view of Weber, Jr. (US 3,450,295).

12. Korchnak et al. discloses a method for fixing a crack in the tank, which comprises crack (13) or hole or die-cut having a backing layer or patch (11) whose area is greater than the area of hole or crack (13), wherein backing layer is provided in particular centrally on the repairing side of the crack, wherein fixing being carried out on the crack in such a way that the crack is completely covered by the die-cut (See figure 1a, paragraph # 5, 62). It further teaches that the patch (11) or backing layer is made of woven or non-woven fabric or a composite material such as fiber composite (See paragraph # 10, 22), which inherently suggests that the backing layer comprises in particular textile material. It further teaches that the die cut (13) has an adhesive coating (12) over its full area beneath the crack, wherein adhesive coating is selected of acrylic coating on the opposite side from the adhesive (See paragraphs # 55-58).

13. Korchnak et al. discloses all claimed structural limitations as discussed above, but fails to teach or suggest foam body for sealing crack.

14. Weber, Jr. ('295) discloses an invention for repairing tank which comprises opening (16) which is filled with polyurethane coating (20) and heated to a range of 65-95 F for expanding the foam body completely fills and/or cover the opening and also cooling and hardening the foam body for carrying out primer orientation of the foam (See example and figures 1-2). It further teaches that the polyurethane foam has a thickness of 3/8" (see example) wherein claimed range and the prior art range of composition are closed enough to demonstrate similar properties and be expected to have a standard results, *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). Furthermore, the claiming of new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable, *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

15. It would have been obvious to one ordinary skill in the art at the time of Applicant's invention to modify the invention of Korchnak et al. by providing expandable foam coating for sealing the crack in tank because such coating is tough and smooth which makes it quite easy to flush off any sludge from the surface of tank, is also involved to minimize any corrosive action

over long period of time which can benefits to the life of repaired tank is quite lengthy and meets the requirement of usage in the industry as suggested by Weber, Jr. ('295).

16. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber, Jr. (US 3,450,295) in view of Korchnak et al. (US 2003/0047268).

17. Weber, Jr. ('295) discloses an invention for repairing tank which comprises opening (16) which is filled with polyurethane coating (20) and heated to a range of 65-95 F for expanding the foam body completely fills and/or cover the opening and also cooling and hardening the foam body for carrying out primer orientation of the foam (See example and figures 1-2). It further teaches that the polyurethane foam has a thickness of 3/8" (see example) wherein claimed range and the prior art range of composition are closed enough to demonstrate similar properties and be expected to have a standard results, *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). Furthermore, the claiming of new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable, *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

18. Weber, Jr. discloses all claimed structural limitations as discussed above. It further teaches that the foam coating (20) is covered by top skin layer (22), but fails to teach or suggest textile backing layer. It further fails to teach or suggest an adhesive layer.

19. Korchnak et al. discloses a method for fixing a crack in the tank, which comprises crack (13) or hole or die-cut having a backing layer or patch (11) whose area is greater than the area of hole or crack (13), wherein backing layer is provided in particular centrally on the repairing side of the crack, wherein fixing being carried out on the crack in such a way that the crack is completely covered by the die-cut (See figure 1a, paragraph # 5, 62). It further teaches that the patch (11) or backing layer is made of woven or non-woven fabric or a composite material such as fiber composite (See paragraph # 10, 22), which inherently suggests that the backing layer comprises in particular textile material. It further teaches that the die cut (13) has an adhesive coating (12) over its full area beneath the crack, wherein adhesive coating is selected of acrylic coating on the opposite side from the adhesive (See paragraphs # 55-58).

20. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Weber, Jr. by providing a textile backing layer because such an alignment is involved to

repair the exterior surface of the tank after fuel contamination as suggested by Korchnak et al..

21. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Weber, Jr. by providing adhesive to cure or to bond the two surfaces (such as foam coating and textile backing layer) together to an acceptable green strength (See paragraph # 5) as suggested by Korchnak et al..

22. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Korchnak et al. (US 2003/0047268) in view of Weber, Jr. (US 3,450,295) further in view of Ashcroft et al. (US 3,689,320).

23. Korchnak et al. and Weber, Jr. disclose all claimed structural limitations as discussed above. Korchnak et al. further discloses textile backing layer which comprises woven fabrics, but fails to teach or suggest weft count or warp count of woven fabrics.

24. Ashcroft et al. discloses an invention which comprises woven cotton fabric mechanical damping material or for decoration, wherein invention comprises woven cotton fabric having 72 wrap count and 60 weft count (See examples 9-11).

25. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Korchnak et al. by

providing weft count or warp count of woven fabrics because such alignments makes the fabric to be easily compressed in the shape of body and also easily removed from the body, and further provides fabric with adequate absorptive property as suggested by Ashcroft et al. ('320).

26. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierrot et al. (US 5,852,854) in view of Ogawa (US 6,103,047).

27. Pierrot et al. ('854) discloses an invention for obturating any opening (2), wherein invention comprises plug and adhesive mixture for obturating opening (See abstract), wherein adhesive mixture comprises acrylic coating.

28. Pierrot et al. discloses all claimed structural limitations as discussed above. It further discloses plug for obturating opening, but fails to teach or suggest textile backing layer and expanding foam body.

29. Ogawa ('047) discloses an invention for making molded body which can be used for repairing articles related to industries, bag, and the like; wherein mounting tool (40) comprises urethane elastomer (41) having desired shape; textile material (42) as a backing layer (See col.8 lines 40-45), wherein the thickness of urethane foam is 2 to 3 mm (See col.5 lines 9-10). It further discloses the step of heating the foam body with gasification reaction and solidification reaction as a step of cooling and hardening the foamingly

expanded foam body (See col.8 lines 45-60; col.9 lines 11-35). It further discloses adhesive of silicone rubber material (43). Here, the location of adhesive is quite different than the instant application, but the function of both adhesive is similar. Therefore, it has been recognized that to shift location of parts when the operation of the device is not otherwise changed is within the level of ordinary skill in the art, *In re Japikse*, 86 USPQ 70; *In re Gazda*, 104 USPQ 400.

30. It would have been obvious to of ordinary skill in the art at the time of Applicant's invention to modify the invention of Pierrot et al. by providing mounting tool of Ogawa because such alignment is capable to have an excellent shape-maintainability for obturating any opening, which can benefit to improve life length of the repaired body.

31. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 5,166,007) in view of Ogawa (US 6,103,047).

32. Smith et al. ('007) discloses an invention for repairing composition and structure wherein invention comprises an opening; a patch (19) as a textile backing layer comprises layers of woven fabric (22-24) and bottom layer (25) for the patch to adhere; and adhesive layer (26) which is opposite from the adhesive (25) (See figure 3). It further teaches that the opening comprises

reinforcing material and/or thickening agent (31, 32). Figure 3 further teaches that the textile backing layer whose area is greater than the area of the opening to be obturated and which is provided particular centrally, on the adhesively treated side, and fixing being carried out on the hole in such a way that the hole is completely covered by die-cut and resin material is located within the hole.

33. Smith et al. discloses all claimed structural limitations as discussed above, but fails to teach or suggest foam body and material for adhesive layer.

34. Ogawa ('047) discloses an invention for making molded body which can be used for repairing articles related to industries, bag, and the like; wherein mounting tool (40) comprises urethane elastomer (41) having desired shape; textile material (42) as a backing layer (See col.8 lines 40-45), wherein the thickness of urethane foam is 2 to 3 mm (See col.5 lines 9-10). It further discloses the step of heating the foam body with gasification reaction and solidification reaction as a step of cooling and hardening the foamingly expanded foam body (See col.8 lines 45-60; col.9 lines 11-35). It further discloses adhesive of silicone rubber material (43). Here, the location of adhesive is quite different than the instant application, but the function of both adhesive is similar.

35. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Smith et al. by providing Polyurethane foam body of Ogawa rather than resin material because urethane foam body provides tough bond between two surfaces for obturating any opening which can be beneficial to improve life length of the repaired body.

36. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Smith et al. by providing silicone rubber material as an adhesive coating of Ogawa because such coating provides an excellent resiliency, the restoring ability and the separating ability for bonding surfaces.

37. Claims 1-2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 5,166,007) in view of Preston (US 5,118,454).

38. Smith et al. ('007) discloses an invention for repairing composition and structure wherein invention comprises an opening; a patch (19) as a textile backing layer comprises layers of woven fabric (22-24) and bottom layer (25) for the patch to adhere; and adhesive layer (26) which is opposite from the adhesive (25) (See figure 3). It further teaches that the opening comprises reinforcing material and/or thickening agent (31, 32). Figure 3 further

teaches that the textile backing layer whose area is greater than the area of the opening to be obturated and which is provided particular centrally, on the adhesively treated side, and fixing being carried out on the hole in such a way that the hole is completely covered by die-cut and resin material is located within the hole.

39. Smith et al. discloses all claimed structural limitations as discussed above, but fails to teach or suggest foam body.

40. Preston discloses an invention for repairing voids which comprises polyurethane foam as an expandable material; allowing material to expand to fill the sheath so that expanded material substantially conform the void and thus fills the voids (See col.2 lines 64-68; col.4 lines 1-2).

41. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Smith et al. by providing Polyurethane foam body of Preston because such an alignment is involved to provide an improved means for repairing voids which may appear salvage product without any intermediate or future detrimental effects in the product (See col.2 lines 41-47).

42. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pierrot et al. (US 5,852,854) in view of Ogawa (US 6,103,047) further in view of Ashcroft et al. (US 3,689,320).

43. Pierrot et al. and Ogawa disclose all claimed structural limitation as discussed above. Ogawa further teaches that the mounting tool comprises textile backing layer having woven fabric, but fails to teach or suggest weft count or warp count of woven fabrics.

44. Ashcroft et al. discloses an invention which comprises woven cotton fabric mechanical damping material or for decoration, wherein invention comprises woven cotton fabric having 72 wrap count and 60 weft count (See examples 9-11).

45. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Pierrot et al. and/or Ogawa by providing weft count or warp count of woven fabrics because such alignments makes the fabric to be easily compressed in the shape of body and also easily removed from the body, and further provides fabric with adequate absorptive property as suggested by Ashcroft et al. ('320).

46. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 5,166,007) in view of Ogawa (US 6,103,047) further in view of Ashcroft et al. (US 3,689,320).

47. Smith et al. and Ogawa disclose all claimed structural limitation as discussed above. Ogawa further teaches that the mounting tool comprises textile backing layer having woven fabric. Smith et al. also teaches that the

patch or backing layer comprises layers of woven fabrics. But they fail to teach or suggest weft count or warp count of woven fabrics.

48. Ashcroft et al. discloses an invention which comprises woven cotton fabric mechanical damping material or for decoration, wherein invention comprises woven cotton fabric having 72 wrap count and 60 weft count (See examples 9-11).

49. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Smith et al. and/or Ogawa by providing weft count or warp count of woven fabrics because such alignments makes the fabric to be easily compressed in the shape of body and also easily removed from the body, and further provides fabric with adequate absorptive property as suggested by Ashcroft et al. ('320).

Conclusion

50. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIMPLE N. BODAWALA whose telephone number is (571)272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PHILLIP C. TUCKER can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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